REMARKS

Claims 1-15 remain pending in the case.

Objection to Drawings

In paragraph 3, the Office Action objected to the drawings stating that "Figure 1 should be designated by a legend such as "---Prior Art --- because only that which is old is illustrated." Applicants have amended the drawings to designate a "Prior Art" legend. Therefore, Applicants believe that the objection to Figure 1 has been overcome.

In paragraph 4, the Office Action stated that either step 206 should be omitted from Figure 5 or else the specification should be amended to include a description of step 206. The specification has been amended to include a description of step 206. Therefore Applicants believe that the objection stated in paragraph 4 has been overcome.

102(a) Rejections

Claims 1, 3-6, 8-11, 14 and 15

At paragraph 6 of the Office Action, Claims 1, 3-6, 8-11, 14 and 15 are rejected under 35 U.S.C. 102(a) as being anticipated by Benitez et al. U.S. Patent No. 6,189,141 B1 (referred to hereinafter as "Benitez"). Applicants have reviewed the instant application and respectfully assert that the claimed embodiments of the present invention are not anticipated by the prior art for the following rationale.

Claim 1 recites, "A computer-implemented method for reverting a process in an in-line instrumented state to an uninstrumented state, said method comprising:

...

unmapping instrumented code space such that said instrumented code space is inaccessible to said process;

...

executing said process and, provided said process generates a fault by seeking to access an address in instrumented code space, providing a corresponding address in said uninstrumented code space."

Applicants respectfully submit that Benitez neither teaches nor suggests, mong other things, "... reverting a process in an in-line instrumented state to an uninstrumented state, said method comprising: ...unmapping instrumented code space such that said instrumented code space is inaccessible to said process;...executing said process and, provided said process generates a fault by seeking to access an address in instrumented code space, providing a corresponding address in said uninstrumented code space," as recited by Claim 1. For example, in the abstract, among other places, Benitez teaches a method and a system for reducing unnecessary translations and optimizations to increase the speed for executing code. This is accomplished by identifying traces within the code and determining the frequency with which those traces are executed or emulated. If the traces are executed frequently, the traces are "hot traces" and are candidates for translation/optimization. However, if the traces are executed infrequently, the traces are "cold traces" and are not candidates for

translation/optimization. The frequency with which the traces are executed is tracked and compared to a threshold to determine which traces are "hot" and which traces are "cold."

Benitez defines a trace as being "...made of one or more blocks of original instructions of an executable file, each of which may be reached through a common control path," at Col. 2, lines 53-55. Benitez defines a block as being "...made up of one or more basic blocks" and basic blocks as "...a sequence of instructions of an executable file such that there is only one entrance into the basic block and such entrance is the first instruction in the sequence. A basic block may also consist of a single instruction...," at Col. 2, lines 55-63.

In contrast, embodiments of the instant application provide for uninstrumenting in-line code instrumented on-the-fly. For example, as discussed on page 10, lines 2-5 of the instant application,

> ...the need for uninstrumentation may arise when a child process inherits the instrumented parent process' complete context including the parent's program text that may have been modified by instrumentation. In such a case, if no special handling is done at this point, the child process will execute the inherited instrumented code from the parent, thereby perturbing the measurements intended to be made exclusively on the parent process. In order to exclude the child process from any measurements, uninstrumentation as is taught by the present invention is performed by the child process.

Benitez does not teach a process let alone "...reverting a process in an in-line instrumented state to an uninstrumented state," as recited by Claim 1. Instead, as already discussed herein, Benitez discloses determining the frequency with which traces are executed.

The rejection states that "ummapping instrumented code space such that said instrumented code space is inaccessible to said process," as recited by Claim 1 is disclosed by Benitez at Col. 27, lines 49-51. Although Benitez at Col. 27, lines 49-51 discloses "backpatching a jump or fall-through instruction...,"this portion of Benitez (e.g. Benitez at Col. 27, lines 49-51) does not disclose "unmapping" anything let alone "ummapping instrumented code space such that said instrumented code space is inaccessible to said process."

The rejection states that "executing said process and, provided said process generates a fault by seeking to access an address in instrumented code space, providing a corresponding address in said uninstrumented code space," is disclosed by Benitez at Col. 11, lines 28-38. However, this portion of Benitez (e.g., Col. 11, lines 28-38) does not even disclose executing a process. Instead, this portion of Benitez (e.g., Col. 11, lines 28-38) discloses terminating the operation of a trace designator 100. Further, Benitez does not teach providing a corresponding address in said uninstrumented code space as the result of a fault generated by the execution of a process. In order for Benitez to teach "executing said process and, provided said process generates a fault by seeking to access an address in instrumented code space, providing a corresponding address in said uninstrumented code space," of Claim 1, Benitez would have to teach, among other things, that a process generates a fault by seeking to access an address of Benitez' "original code."

Therefore, Applicants respectfully submit that Benitez neither teaches nor suggests, among other things, "... reverting a process in an in-line instrumented state to an uninstrumented state, said method comprising: ...unmapping instrumented code space such that said instrumented code space is inaccessible to said process;...executing said process and, provided said process generates a fault by seeking to access an address in instrumented code space, providing a corresponding address in said uninstrumented code space," as recited by Claim 1. Therefore, for at least these reasons, Applicants traverse the rejection of the instant application under 35 USC 102(a) on the basis of Benitez.

Claims 6 and 11 should be allowable for similar reasons that Claim 1 should be allowable in that Claims 6 and 11 also recite "... reverting a process in an in-line instrumented state to an uninstrumented state, said method comprising: ...unmapping instrumented code space such that said instrumented code space is inaccessible to said process;...executing said process and, provided said process generates a fault by seeking to access an address in instrumented code space, providing a corresponding address in said uninstrumented code space."

Because Claims 3-5 depend from Claim 1, Claims 8-10 depend from Claim 6 , and Claims 13-15 depend from Claim 11 and contain additional limitations that are patentably distinguishable over Benitez, these claims are also considered patentable over Benitez. Therefore, Applicants respectfully submit that the basis for rejecting Claims 3-5, 8-10, and 13 - 15 under 102(a) is traversed.

<u>103(a) Rejections</u>

<u>Claims 2, 7 and 12</u>

At paragraph 8 of the Office Action, Claims 2, 7, and 12 are rejected under 35 U.S.C. 103(a) as being anticipated by Benitez et al. U.S. Patent No. 6,189,141 B1 (referred to hereinafter as "Benitez"). For the sake of clarity, it is respectfully pointed out that the 102(a) rejection cited in paragraph 8 refers to the same reference (e.g., Benitez et al. U.S. Patent No. 6,189,141 B1) that the 102(a) rejection cited in paragraph 6 refers to. Therefore, the rejection cited in paragraph 8 should be a 102 rejection since the primary and the secondary reference are the same reference.

For at least the reasons already discussed herein with reference to Benitez, Applicants respectfully submit that Benitez neither teaches nor suggests, among other things, "... reverting a process in an in-line instrumented state to an uninstrumented state, said method comprising: ...unmapping instrumented code space such that said instrumented code space is inaccessible to said process;...executing said process and, provided said process generates a fault by seeking to access an address in instrumented code space, providing a corresponding address in said uninstrumented code space," as recited by Claims 1, 6, and 11. Therefore, for at least these reasons, Applicants traverse the rejection of the instant application under 35 USC 103(a) on the basis of Benitez.

Because Claim 2 depends from Claim 1, Claim 7 depends from Claim 6 , and Claim 12 depends from Claim 11 and contain additional limitations that are patentably distinguishable over Benitez, these claims are also considered

patentable over Benitez. Therefore, Applicants respectfully submit that the basis

for rejecting Claims 2, 7, and 12 under 103(a) is traversed.

CONCLUSION

In light of the above remarks, Applicant respectfully requests reconsideration of the rejected Claims 1-15.

Based on the argument presented above, Applicant respectfully asserts that Claims 1 through 15 overcome the rejections of record and, therefore, allowance of these Claims is respectfully solicited.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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